City of Lafayette Staff Report

To: City Council

From: Mike Moran, Associate Engineer

Date Written: April 4, 2008

Meeting Date: April 14, 2008

Subject: Estates Drive and Canyon Road Pavement Rehabilitation and Storm Drain Improvements Project, Project Number 014-9668, Award of Contract

---

Introduction/Background

This project includes reconstructing the pavement on Estates Drive and the public portion of the northwest fork of Canyon Road. The project also includes installing safety improvements and several sections of storm drain in Estates Drive and Canyon Road. To improve the structural properties of the road and to minimize the cost of exporting and importing base material, the reconstruction process will include pulverizing the existing asphalt road and re-using most of the pulverized material as road base. The bid package for this project also includes reconstructing Sweet Court, which is a cul-de-sac off Sweet Drive. This street was not part of the original scope of work, and the background for including it is discussed below.

Bids for the project were opened on March 26, 2008. Staff is seeking Council action to award the construction contract to the lowest bidder and to allocate additional funding to the project budget.

Summary of Bids and Project Budget

The Engineer's estimate and the five bids received for the project are summarized below:

Contractor	**Bid**
Engineer's Estimate	$952,000
1. William G. McCullough Co.	$981,803
2. Bay Cities Paving and Grading, Inc.	$1,045,933
3. JA Gonsalves and Son	$1,275,052
4. GradeTech, Inc.	$1,278,799
5. C.F. Archibald Paving, Inc.	$1,431,025

Budget Status

Original Project Allocation	$	982,000
Expected Reimbursement from Utility Companies for Coordinated Work	$	11,000
Design and Bidding	< $	137,000 >
Construction Staking and Monument Replacement	< $	36,000 >
Construction Testing and Inspection	< $	15,000 >
Funds Available for Construction	$	805,000

Funds Available for Construction	$	805,000
Low Bid (Rounded)	< $	982,000 >
Additional Budget Needed for Construction	< $	177,000 >
Additional Budget Needed for Construction Contingency (10% of Low Bid)	< $	98,000>
Total Additional Funds Needed to Fully Fund Project	$	275,000

Discussion of Project Cost Increases

The addition of Sweet Court contributes about $46,000 to the construction cost. As mentioned above, this project was a late addition to the bid package at the request of Sweet Court residents. The City Council will recall that last year when Sweet Drive was rebuilt, the City accepted an offer from Oak Court residents to pay half of the cost to rebuild their street in order to accelerate that project. Subsequently the City Council also directed staff to accommodate similar requests from other streets that may be interested. The residents of Sweet Court tried to include their court with last year's paving project, but did not request in time to fit into the paving schedule. As such, staff included the work as part of this year's bid package. Based on our preliminary estimate of $30,000, the residents had pledged $15,000 toward the cost of reconstructing the road. Given the higher bid prices received, staff has value-engineered the design to reduce the cost by approximately $10,000 by deleting a specialty berm from the scope of work, and the street may now be completed for $36,000. The residents have been informed of the bids received and the value engineering option. Based on this information, representatives of the street are inclined to increase their pledge to $18,000 to cover half of the cost of the street work. However, since not every Sweet Court resident had committed to an increased pledge by the due date of this staff report, staff will confirm the resident's intent and update the Council at their April 14th meeting. If the residents commit to an $18,000 contribution, staff would recommend that the Council allocate an $18,000 match to the project so that this street may be included with this year's work.

During design, field conditions warranted adding drainage and safety features to the project beyond what was originally contemplated. For example, staff identified one area that needed four hundred feet of additional storm drain to reroute storm water from being discharged onto private property and creating an erosion problem for the homeowners. This additional storm drain system increased the bid cost by $38,000. Over 1,200 linear feet of guard rail were also added to respond to public review comments raised during the detailed design phase to address several safety concerns on this windy and steep road. The cost of the guard rail is over $113,000, which is a compounded increase due not only to the additional quantity, but also higher unit prices because of the difficulty of access and construction on the steep drop-off along the road edge. The combination of the additional storm drain and guard rail increases the project cost by over $150,000 (see marked-up key map for locations of additional work).

The current price of asphalt concrete accounts for another major component of the cost escalation. The low bid price for asphalt concrete on this project is $112 per ton for base paving and $93 per ton for finish paving. This represents an average paving cost of nearly $105 per ton. Last year's paving costs (which were already significantly higher than the previous year's figures) were about $84 per ton. Since bid prices reflect costs of work *installed,* the high asphalt concrete price reflects not only the high price of oil in the asphalt concrete materials, but the fuel cost for transportation and installation equipment. Staff had assumed an average of $85 per ton in the engineer's estimate, thinking that this should adequately reflect recent price trends, but obviously we are poor prognosticators of commodity prices. The cost difference in this line item accounts for about $76,000 of the project budget shortfall.

Assuming that the City Council agrees with the additions in the work scope, staff recommends allocating additional funds to proceed with the project. The physical terrain of Estates Drive and Canyon Road causes us to believe that slightly higher than typical bid prices should be expected. All things considered the low bid is actually within about 3% of the engineer's estimate in this case. The uncertainty is in the costs of petroleum-based materials and fuel for transportation and equipment, which are major components of a road project. Given the vagaries of oil prices, staff would only be guessing whether rebidding the project at some future time would result in a more favorable outcome. We know for certain that doing so would substantially delay the construction work until possibly next season.

Fiscal Impact:

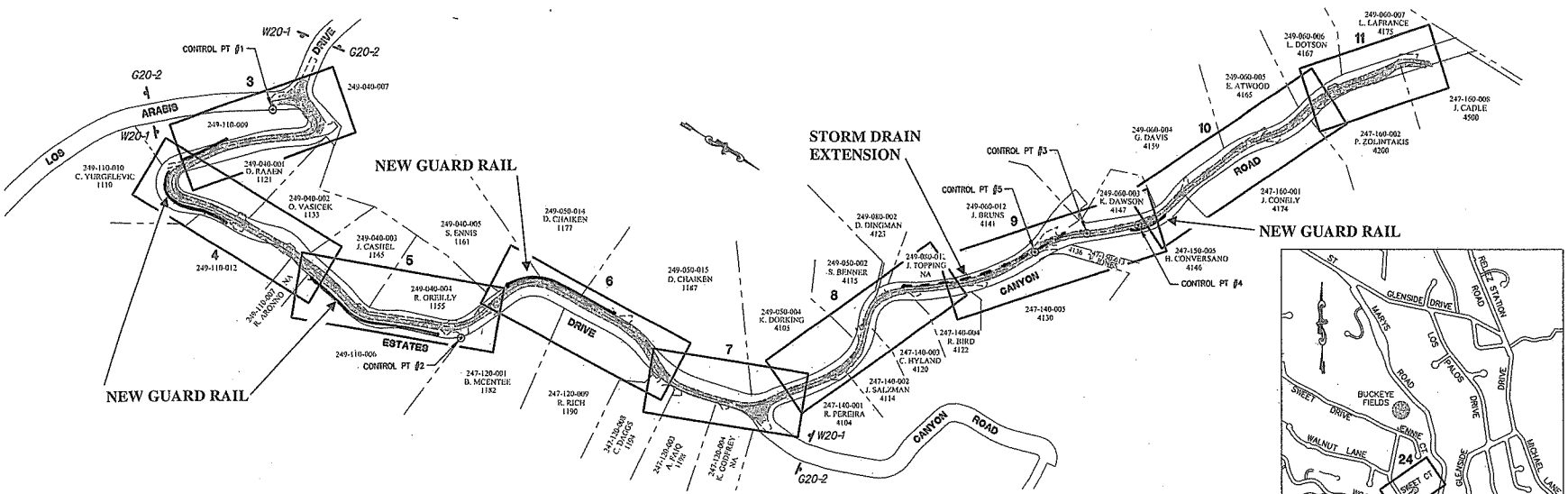
An allocation of $275,000 is needed to fully fund the additional scope of work and provide a 10% construction contingency for the project. The capital program fund balance (Fund 014) currently carries about $260,000 in surplus from completed 2007 projects that were closed out and accepted by Council in March. Staff recommends using that money to fund this project.

Recommendation:

1. Adopt the project plans, specifications, and project details to conform to the Uniform Construction Accounting Act.

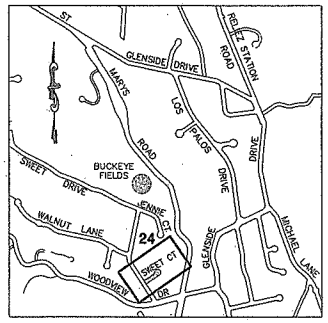
2. Award contract for the Estates Drive and Canyon Road Pavement Rehabilitation and Storm Drain Improvement Project, Project Number 014-9668, to William G. McCullough Co. in the amount of $981,803.50.

3. Authorize a project budget increase of $260,000, to be funded from Fund 014 fund balance.



ESTATES DRIVE AND CANYON ROAD

(SHADED ROAD AREA DENOTES PAVEMENT RECONSTRUCTION)



SWEET COURT

(ADDED BID)

CONSTRUCTION AREA SIGNS:

TYPE	DESCRIPTION & SIZE	QUANTITY
G20-2	"END ROAD WORK" (42"x18")	3 EA
W20-1	"ROAD WORK AHEAD" (36"x36")	3 EA
		6 TOTAL

CONSTRUCTION AREA SIGN NOTES:

1. THE LOCATION FOR EACH SIGN SHALL BE APPROVED IN ADVANCE BY THE ENGINEER. UNLESS OTHERWISE SHOWN ON THE PLANS, SIGNS SHALL BE MOUNTED ON 4"x4" WOOD POSTS, SECURELY BURIED IN THE GROUND.
2. ALL EXCAVATION FOR CONSTRUCTION AREA SIGNS SHALL BE DONE BY METHODS USING HAND TOOLS WITHOUT THE USE OF POWER TOOLS OR DRILLS. EXISTING UTILITIES SHALL BE MARKED BY UNDERGROUND SERVICE ALERT (USA TEL: 1-800-227-2600) PRIOR TO COMMENCING ANY EXCAVATION.

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2600

EXISTING PAVEMENT AND CORE DATA				
STREET LOCATION	CORE NO	AC THICKNESS (IN)	AB THICKNESS (IN)	SUBGRADE CLASSIFICATION AND CONDITION
1107 ESTATES DRIVE	①	2	3	MEDIUM BROWN SILTY CLAY (DRY)
1133 ESTATES DRIVE	②	7	3	GRAY BROWN SILTY CLAY (DRY)
1187 ESTATES DRIVE	③	5	3	GRAY BROWN SILTY CLAY (DRY)
4104 CANYON ROAD	④	2-1/2	3	DARK GRAYISH BROWN SILTY CLAY (DRY)
4131 CANYON ROAD	⑤	2-1/2	3-1/2	GRAY BROWN SANDY CLAY (DRY)
4159 CANYON ROAD	⑥	4	7-1/2	DARK GRAY SANDY CLAY (DRY)
4175 CANYON ROAD	⑦	2	N/A	MEDIUM BROWN SILTY CLAY (DRY)

CONTROL POINT DATA				
POINT NO.	NORTHING	EASTING	ELEV	DECSCRIPTION
#1	7357.24	11743.07	539.95	FND 2"IP
#2	8134.04	12011.74	722.71	FND 2"IP
#3	9509.26	10843.12	991.20	FND IP LS669
#4	9822.09	10746.68	998.14	FND IP
#5	9409.57	10964.72	983.14	RR SPIKE

BENCHMARK:

SET CONCRETE FASTENER AND BRASS TAG ON TOP OF CURB, CENTER OF DOUBLE CONCRETE DROP INLET, NORTH SIDE OF EL NINO RANCH ROAD (LAFAYETTE) AT ITS INTERSECTION WITH ACALANES ROAD.

CONTRA COSTA COUNTY BM #3432 ELEVATION = 476.548

STATION LINE ALIGNMENT DATA:

SEE SHEET 16 FOR STATION LINE ALIGNMENT DATA.

AZARI ENGINEERING, INC.
4607 CLAYTON ROAD, SUITE 100
CONCORD, CA 94521
TEL: (925) 676-3700
FAX: (925) 676-4600

SUBMITTED FEB 22, 2008
PROJECT ENGINEER

APPROVED _____ 2008
CITY ENGINEER
RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

NO.	DESCRIPTION	BY	DATE

CITY OF LAFAYETTE

ESTATES DRIVE & CANYON ROAD PAVEMENT REHABILITATION & STORM DRAIN IMPROVEMENTS

KEY MAP AND CONSTRUCTION AREA SIGNS

DESIGNED: MA/DK	PROJECT NO.: 014-9668	SCALE: NO SCALE	
DRAWN: JJH	ROLL	FRAME	
CHECKED: MA	AEI NO: 2607	SHEET 2 OF 25	
DATE: FEB 22, 2008	DWG: 02-2607-KM		

2/21/2008 11:47:49 AM